

Laboratory 12-13

Objectives

- Operations with files
- Serialization

Exercises

1. Create a class Christmas Tree class that has like attributes a price, a type (artificial or natural) and a height. Add a transient field that contains the price reduced with 10%.
 - a) Create 10 objects, display them.
 - b) Create a method that serialize the objects into a file
 - c) Create a method that reads the objects from the file and display them.
2. Create a text file that contains one integer on each line.
 - a) Use LineNumberReader to read the file and display the even numbers from the files that are stored on odd lines
 - b) Use Scanner to read the file and calculate the arithmetic and geometric mean of the numbers stored in the file.
3. Use File class to display the content of a directory. Read the directory path from standard input. For each file in the directory display the name, relative path, the file size. For each subdirectory display the number of files contained and its content.
4. Use NIO API in order to:
 - a) Copy one file from one directory to another
 - b) To filter all files with a extension read from standard input
 - c) Delete the content of a directory recursively
5. Create a text file that stores objects of type Chair that has like attributes producer, fabric and price. Also provide a method that reads the file content and creates a list of chairs and sorts the list decreasing based on chairs price.
6. Using RandomAccessFile class, write a function
 - a) that creates a file with integer numbers.
 - b) that displays the content of the file
 - c) that replace the negative numbers from the file with their absolute value
 - d) That adds a list of the numbers at the end of the file
7. Define a class date that contains like attributes year, month, day and uses StringTokenizer class to parse the following date formats “DD/LL/YYYY” (11/11/2018) and “DD Month YYYY” (11 December 2018). Add methods that allow to display the date in different formats.